

LISTING OF THE CLAIMS:

Claims 1 -4 (Cancelled)

5. (Currently amended) A jig for use in certification of accuracy of a vehicle wheel aligner system, comprising:

two axles of equal length;

two side spacers of equal length;

a coupler at each end of each of the two side spacers, allowing attachment of the two side spacers to ends of the two axles, to thereby form a parallelogram frame from the axles and side spacers, and to allow detachment of the two side spacers from the ends of the axles to disassemble the frame;

a diagonal spacer, for use in setting length of a diagonal of the frame during assembly of the frame, such that the frame becomes rectangular;

four plates structures for simulating vehicle wheels, each respective plate structure being adapted to facilitate attachment thereto of a head of a vehicle wheel aligner system under test, and each respective plate structure being mounted on one end of one of the axles; and

a stand system adapted to support the frame in a position to allow the vehicle wheel aligner system under test to measure a parameter of the apparatus from the attached heads of the vehicle wheel aligner system under test, for comparison to a known parameter of the jig.

Claims 6-9 (Cancelled)

10. (Currently amended) The jig of claim [[9]] 5, wherein:

each end of each of the axles comprises a stub shaft;

each coupler comprises a pivotable member attached at a respective end of one of the spacers having an opening for receiving one of the stub shafts; and

the means for adjusting the length, on the side spacers, comprises threaded connections of the couplers to the ends of the side spacers.

11. (Currently amended) The jig of claim [[9]] 5, in combination with a distance setting shaft of a predetermined length, for use in setting the length of each of the two side spacers to the predetermined length before attachment thereof to the axles at the stub shafts.

12. (Original) The combination of claim 11, wherein the distance setting shaft includes two quasi-stub shafts at the distance setting shaft for inserting into openings of pivotable members of either of one of the side spacers, when the one of the side spacers has the predetermined length.

13. (Original) An assembly for use in certification of accuracy of a vehicle wheel aligner system, comprising:

a jig comprising:

a) two axles of equal length;

b) two side spacers of equal length;

c) a pivotable coupler at each end of each of the two side spacers, allowing attachment of the two side spacers to thereby form a frame from the axles and side spacers, and to allow detachment of the two side spacers from the ends of the axles to disassemble the frame;

d) four plate structures for simulating vehicle wheels, each respective plate structure being adapted to facilitate attachment thereto of a head of a vehicle wheel aligner system under test, and each respective plate structure being mounted on one end of one of the axles; and

e) a stand system adapted to support the frame in a position to allow the vehicle wheel aligner system under test to measure a parameter of the apparatus from the attached heads of the vehicle wheel aligner system under test, for comparison to a known parameter of the jig.

14. (Original) The assembly of claim 13, wherein:

the side spacers are adjustable in length; and

the assembly further comprises at least one setting bar, for setting a predetermined configuration of the jig during assembly.

15. (Original) The assembly of claim 14, wherein the at least one setting bar comprises a diagonal spacer, for use in setting lengths of diagonals of the frame to be equal during assembly.

16. (Original) The assembly of claim 15, wherein the diagonal spacer comprises two sections and a detachable coupling for connecting the two sections together.

17. (Original) The assembly of claim 15, wherein the diagonal spacer comprises means for adjusting the length of the diagonal spacer.

18. (Original) The assembly of claim 15, wherein the at least one setting bar further comprises a distance setting shaft for use in confirming that the length of each of the two

side spacers is adjusted to a predetermined equal length before attachment to the axles at the stub shafts.

19. (Original) The assembly of claim 14, wherein the at least one setting bar comprises a distance setting shaft of a set length, for use in confirming that the length of each of the two side spacers is adjusted to a predetermined equal length before attachment to the axles at the stub shafts.

20. (Original) The assembly of claim 19, wherein the distance setting shaft comprises:

means for attaching ends of the distance setting shaft to the couplers of either of the side spacers; and

means for adjusting and setting length of the distance setting shaft to define the predetermined equal length for the side spacers.

21. (Currently amended) A method of certifying calibration of a computer-based vehicle wheel alignment system, comprising:

~~checking length of two side spacers of a rectangular certification jig for proper equal length;~~

~~assembling two equal length axles and [[the]] two side spacers into a predetermined parallelogram quadrilateral shape of [[the]] a certification jig on the site of the computer-based vehicle wheel alignment system;~~

~~checking setting at least one diagonal of the certification jig, to insure that the jig is assembled so as to form the predetermined parallelogram quadrilateral shape;~~

~~mounting heads of the wheel alignment system at opposite ends of the axles;~~
operating the wheel alignment system to measure a parameter of the certification jig ~~from the heads mounted on the jig;~~

comparing the measured parameter to a known value of a corresponding parameter of the certification jig; [[and]]

if the result of the comparison shows that the measured parameter is within a standard acceptable range of the known value of the corresponding parameter of the certification jig, certifying the computer-based vehicle wheel alignment system as accurately ~~calibrated~~ calibrated; and

disassembling the quadrilateral shaped certification jig after the certification of the computer-based vehicle wheel alignment system.

22. (Cancelled)

23. (Original) The method of claim 21, wherein the wheel alignment system is an image processing type aligner.

24. (Currently amended) The method of claim 21, wherein the step of comparing comprises:

acquiring certification measurement data, ~~storing certification data~~ and performing calculations on the acquired data, with the wheel alignment system; and

the step of certifying comprises producing certification results for said wheel alignment system.

Claims 25-28 (Cancelled)

29. (New) The method of claim 21, wherein the ends of the axles include structures for simulating vehicle wheels.

30. (New) The method of claim 29, further comprising mounting heads of the wheel alignment system on the structures, to facilitate the operating of the wheel alignment system to measure the parameter of the certification jig.

31. (New) The method of claim 21, wherein a computer of the computer-based vehicle wheel alignment system controls:

the operating of the wheel alignment system to measure the parameter of the certification jig;

the comparing of the measured parameter to the known value of the corresponding parameter of the certification jig; and

the certifying of the computer-based vehicle wheel alignment system as accurately calibrated.

32. (New) The method of claim 21, wherein:

when assembled into the quadrilateral shape, the certification jig is substantially the size of a vehicle as might be processed by the computer-based vehicle wheel alignment system; and

when disassembled, the certification jig is portable.

33. (New) A method of calibrating a computer-based vehicle wheel alignment system, comprising:

assembling two axles and two side spacers into a predetermined quadrilateral shape of a jig on the site of the computer-based vehicle wheel alignment system;

setting at least one diagonal of the jig, to insure that the jig is assembled so as to form a predetermined geometry;

operating the wheel alignment system to measure a parameter of the jig;

comparing the measured parameter to a known value of a corresponding parameter of the jig;

if the result of the comparison shows that the measured parameter is not in agreement with the known value of the corresponding parameter of the jig, offsetting displayed readings produced by the computer-based vehicle wheel alignment system, by the difference in the measured parameter to the known value of the corresponding parameter of the jig, by means of a calibration offset table; and

disassembling the quadrilateral shaped jig after the calibration of the computer-based vehicle wheel alignment system by the offsetting for displayed readings.

34. (New) The method of 33, wherein the ends of the axles include structures for simulating vehicle wheels.

35. (New) The method of 33, further comprising mounting heads of the wheel alignment system on the structures, to facilitate the operating of the wheel alignment system to measure the parameter of the jig.

36. (New) The method of 33, wherein a computer of the computer-based vehicle wheel alignment system controls:

the operating of the wheel alignment system to measure the parameter of the jig;

the comparing of the measured parameter to the known value of the corresponding parameter of the jig; and

the offsetting of the display readings of the computer-based vehicle wheel alignment system.

37. (New) The method of claim 33, wherein:

when assembled into the quadrilateral shape, the jig is substantially the size of a vehicle as might be processed by the computer-based vehicle wheel alignment system; and

when disassembled, the jig is portable.

38. (New) An apparatus for use in certification of accuracy of a vehicle wheel aligner system, comprising:

two axles, two side spacers and a diagonal spacer;

four couplers for allowing attachment of the two side spacers to ends of the two axles, to thereby form a quadrilateral shaped frame having a diagonal length corresponding to length of the diagonal spacer, and to allow detachment of the two side spacers from the ends of the axles to disassemble the frame, wherein:

when assembled, the quadrilateral shaped frame is substantially the size of a vehicle as might be processed by a vehicle wheel aligner system to be certified,

each of the ends of the axles is configured to enable measurement by the vehicle wheel aligner system to be certified,

each time it is assembled, the quadrilateral shaped frame has the same dimensions, and the apparatus is portable when the quadrilateral shaped frame is disassembled.

39. (New) The apparatus of claim 38, further comprising a plurality of stands adapted to support the assembled frame in a position to allow the vehicle wheel aligner system to measure a parameter of the assembled frame from the attached heads, for comparison to a known parameter of the apparatus.

40. (New) The apparatus of claim 38, further comprising structures for simulating vehicle wheels at the ends of the axles to provide a configuration for measurement by the wheel aligner system to be certified.

41. (New) The apparatus of claim 40, wherein the structures are means attached at the ends of the axles to provide a configuration for attachment of a head of the vehicle wheel aligner system to be certified.

42. (New) The apparatus of claim 41, wherein said means comprise four head attachment plates, each plate being mounted at one of the ends of the axles.

43. (New) The apparatus of claim 38, wherein:
each end of each of the axles comprises a stub shaft; and
each coupler comprises a pivotable member attached at a respective end of one of the spacers having an opening for receiving one of the stub shafts.

44. (New) The apparatus of claim 38, wherein:

the axles are equal in length;

the side spacers are adjustable in length; and

the apparatus further comprises a distance setting shaft of a predetermined length, for use

in setting the length of each of the two side spacers to the predetermined length.